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Supporting documents are attached to the report as separate files (MS Word, MS Powerpoint, PDF, HTM).

14. ABSTRACT

The motivation for the Lecture Series springs from a number of interwoven issues. Prominent among them are:

a) NATO has been engaged in several, disparate theaters of low-level, unconventional conflicts,

b) damage to air platforms due to ground fire is an increasing menace, and

c) repair of aircraft albeit temporary of both fixed- and rotary-wing types, if at all possible, needs to be carried in make-shift bases far from logistics centers at home and under severe time constraints.

The focus of the Lecture Series will be on airframes, engines and wiring, specifically the flight-safety-critical elements. The syllabus for the lectures covers epidemiology of ABDR, procedures for assessing damage including diagnostic tools, selection of materials used for repair, selection of appropriate design to carry out repair, modeling and simulation tools used as adjuncts,

15. SUBJECT TERMS

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Battle Damage Repair Techniques and Procedures on Air Vehicles – Lessons Learned and Prospects

(Techniques de réparation au combat et procédures pour les aéronefs - Enseignements tirés et perspectives)

The material in this publication was assembled to support a Lecture Series under the sponsorship of the Applied Vehicle Technology Panel (AVT) on 17-18 May 2010 in Prague, Czech Republic; on 20-21 May 2010 in Košice, Slovak Republic; and on 24-25 May 2010 in Warsaw, Poland.

Published May 2010

The Research and Technology Organisation (RTO) of NATO

RTO is the single focus in NATO for Defence Research and Technology activities. Its mission is to conduct and promote co-operative research and information exchange. The objective is to support the development and effective use of national defence research and technology and to meet the military needs of the Alliance, to maintain a technological lead, and to provide advice to NATO and national decision makers. The RTO performs its mission with the support of an extensive network of national experts. It also ensures effective co-ordination with other NATO bodies involved in R&T activities.

RTO reports both to the Military Committee of NATO and to the Conference of National Armament Directors. It comprises a Research and Technology Board (RTB) as the highest level of national representation and the Research and Technology Agency (RTA), a dedicated staff with its headquarters in Neuilly, near Paris, France. In order to facilitate contacts with the military users and other NATO activities, a small part of the RTA staff is located in NATO Headquarters in Brussels. The Brussels staff also co-ordinates RTO's co-operation with nations in Middle and Eastern Europe, to which RTO attaches particular importance especially as working together in the field of research is one of the more promising areas of co-operation.

The total spectrum of R&T activities is covered by the following 7 bodies:

- AVT Applied Vehicle Technology Panel
- HFM Human Factors and Medicine Panel
- IST Information Systems Technology Panel
- NMSG NATO Modelling and Simulation Group
- SAS System Analysis and Studies Panel
- SCI Systems Concepts and Integration Panel
- SET Sensors and Electronics Technology Panel

These bodies are made up of national representatives as well as generally recognised 'world class' scientists. They also provide a communication link to military users and other NATO bodies. RTO's scientific and technological work is carried out by Technical Teams, created for specific activities and with a specific duration. Such Technical Teams can organise workshops, symposia, field trials, lecture series and training courses. An important function of these Technical Teams is to ensure the continuity of the expert networks.

RTO builds upon earlier co-operation in defence research and technology as set-up under the Advisory Group for Aerospace Research and Development (AGARD) and the Defence Research Group (DRG). AGARD and the DRG share common roots in that they were both established at the initiative of Dr Theodore von Kármán, a leading aerospace scientist, who early on recognised the importance of scientific support for the Allied Armed Forces. RTO is capitalising on these common roots in order to provide the Alliance and the NATO nations with a strong scientific and technological basis that will guarantee a solid base for the future.

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